

Teiga
10/735,887

In the Claims

1. (currently amended) An apparatus for regulating the internal pressure of a closed system, comprising:
 - a) a valve housing connected to said closed system;
 - b) an intake valve connected to said valve housing for receiving a pressurized substance in one direction through said valve housing into the closed system comprising:
 - i) an intake valve aperture for receiving pressurized substance from a source supply into the closed system;
 - ii) an intake valve block for preventing the escape of pressurized substance from the closed system through said intake valve aperture;
 - iii) an intake valve spring for retaining said intake valve block in a closed position; and
 - iv) a source supply trigger pin for forcing said intake valve block into an open position thereby allowing pressurized substance to enter the closed system wherein said intake valve spring retains said intake valve block in a closed position;
 - c) a release valve connected to said valve housing for releasing excess pressure through said valve housing from the closed system, said release valve comprising:
 - i. a release valve aperture in said valve housing for releasing pressurized substance therethrough from a chamber within said valve housing;
 - ii. a release valve block positioned within said release valve aperture for selectively preventing said pressurized substance from escaping said valve housing through said release valve aperture, said release valve block having a first seating surface surrounding said intake valve block at about a 45 degree angle with the central axis of said valve housing, said intake valve block being normally seated on said release valve block first seating surface, said release valve block having a second seating surface adjacent and

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about at a right angle to said first seating surface for seating said release valve block being seated normally on a seating surface formed on an inner surface of said valve housing;

iii. a release valve spring connected to said release valve block for retaining said release valve block in a closed position wherein said release valve spring retains said release valve block in the closed position thereby maintaining a constant internal pressure and upon increasing said constant internal pressure said release valve spring causes said release valve block to move from the closed position to an open position, thereby allowing an excess pressurized substance to enter said chamber surrounding said release valve spring and escape from said release valve aperture, said intake valve block being unseated from said release valve block when pressurized substance is being pumped into said sealed enclosure, and said intake valve block remains seated and moves with said release valve block when said release valve block becomes unseated when pressure within said sealed enclosure is being released, said release valve block having an outer annular recess for seating one end of said release valve spring, an opposite end of said release valve spring restrained by a piston-like member mounted on said source supply trigger pin, an annular space between said piston-like member and said inner surface of said valve housing, and openings through said piston-like member whereby escaping pressurized substance flows through said annular space and openings in said piston-like member when said release valve block is in an open position, and said release valve block having an inner annular recess for seating one end of said intake valve spring[[.]] : and

d) a setting nut connected to said valve housing and an opposite end of said release valve spring for selectively compressing said release valve spring for determining a desired pressure level to be maintained within said closed system as expressed by the alignment of said setting nut with graduated indicia etched on the outside of said valve housing, said setting nut covering over some of said graduated indicia during adjustment thereof thereby indicating a selecting setting of maximum pressure.

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2-3. (canceled)

4. (currently amended) The apparatus as recited in claim 1 [[3]], wherein said setting nut is adjusted in accordance with the formula $P=KX/A$, where area A and spring constant K are constants and variable setting X obtains the pressure P.

5. (currently amended) The apparatus as recited in claim 4 [[3]], further comprising a retaining nut for retaining said setting nut in a desired position.

6. (original) The apparatus as recited in claim 5, wherein said retaining nut is threadedly attached to said valve housing.

7. (canceled)

8. (previously presented) The apparatus as recited in claim 6, wherein said intake valve aperture is threadedly covered by a cap.

9. (currently amended) The apparatus as recited in claim 8, wherein said valve housing is connected to a tire.

10-13. (canceled)

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